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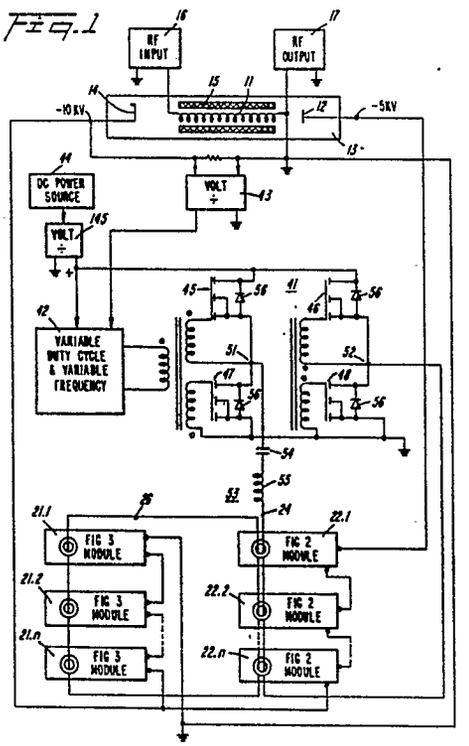
(71) Applicant: **VARIAN ASSOCIATES, INC.**
611 Hansen Way
Palo Alto, CA 94303(US)

(72) Inventor: **Ross, Randall I.**
7030 Corte Del Oro
Pleasanton California(US)
Inventor: **Gunn, Bradley**
1644 Benton
Sunnyvale California 94087(US)

(74) Representative: **Cline, Roger Ledlie et al**
EDWARD EVANS & CO. Chancery House
53-64 Chancery Lane
London WC2A 1SD(GB)

(54) **High voltage power supply particularly adapted for a TWT.**

(57) A power supply for helix and collector electrodes of a traveling wave tube is driven by an AC power source having a frequency of at least 500 KHz. The helix supply includes plural, stacked voltage doubler AC to DC modules responsive to the 500 KHz source. The collector supply includes plural AC to DC modules, each having a diode full wave rectifier bridge, connected in stacked relation. Each of the modules includes a transformer with a ferrite, toroidal core dimensioned so that it is not driven into saturation by the 500 KHz source. Each module also includes inexpensive, signal switching diodes having a recovery time of approximately 4 nanoseconds. The ratio of the collector to helix DC voltages is maintained constant by threading a common lead through the apertures of the toroidal cores of the helix and collector modules. A separate common lead threaded through the apertures of the toroidal cores in the collector modules is connected directly to the 500 KHz power source. A feedback circuit responsive to the helix-cathode voltage of the TWT controls the helix power supply voltage precisely.



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EUROPEAN SEARCH REPORT

Application Number

EP 87 30 7466

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	US-A-3 930 196 (PARK) * Column 4, line 28 - column 7, line 65; figure 1 * ---	1	H 02 M 7/219 H 02 M 7/25
A	GB-A-2 117 985 (TURNBULL) * Abstract * -----	1	

TECHNICAL FIELDS SEARCHED (Int. Cl.4)

H 02 M 7/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	28-03-1989	DUCHEYNE R.C.L.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

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